FEED SUPPLEMENTATION FOR INCREASING LIVESTOCK PRODUCTION (INS/5/023)

D3

MODEL PROJECT

CORE FINANCING

YEAR	Experts		Group Activity	Equipment	Fellowships		Scientific Visits		Group Training	Sub-Contracts	Misc. Comp.	TOTAL
	m/d	US $	US $	US $	m/d	US $	m/d	US $	US $	US $	US $	US $
1997	1/0	13,200	0	0	0/0	0	0/0	0	0	31,000	0	44,200
1998	1/0	13,950	0	0	0/0	0	0/0	0	0	30,000	0	43,950

First Year Approved: 1997 Total expenditure to 30 September 1996: $70,294 (TCF)

OBJECTIVES: This project's development goal is to increase food security and strengthen the rural economy through sustainable methods for increasing livestock productivity. Its specific objective is to extend the use of simple nutrient block feed supplements for cattle and goats to a large proportion of the country's smallholder farms.

BACKGROUND: In Indonesia, only 10% of the land area is available for pasturage, yet animal production is a major source of protein. It is a long term goal of the Government to enhance utilization of locally available livestock feed sources through development of efficient feeding systems. Particularly in the eastern regions, where a long dry season tends to predominate, the quantity and quality of feedstocks is not in proportion to the livestock population. Such areas require feeding strategies appropriate to the seasonal fluctuation in the availability of feedstocks. These strategies must also be adaptable to conditions prevailing in traditional villages, where most livestock production takes place. The Research and Development Programmes in Animal Nutrition at the Centre for the Applications of Isotopes and Radiation in Jakarta have successfully applied radioisotopic tracers to studies of the effect of various feed supplements on rumen microbial growth. The Agency has assisted this effort for some time through CRPs and TC projects. This earlier work established a clear relationship between enhanced rumen microbial growth and weight gain, increased milk production, and improved reproductive capacity. Field trials in five provinces showed that highly cost-effective enhancement of rumen function resulted from the use of urea molasses multinutrient blocks (UMMB) of optimal composition. These results received official recognition and approval for dissemination to appropriate areas throughout the country. A pilot extension effort of the UMMB in three livestock rearing areas focused on methods for producing the blocks on a home industrial scale. A very workable approach evolved: leaders of farmers' Cooperative Unions organize production using their own resources and a labor pool drawn from housewives and young unemployed persons. This approach also helps reduce village unemployment problems. After seven years of practice, the technology has proven to be appropriate and sustainable. Under INS/5/023, the Directorate of Livestock Services made further progress towards understanding how best to transfer UMMB technology so as to optimize animal production and improve farmers' incomes. The next step is to put these insights into practice on a much wider scale. To do this will require both stepped up extension work and adaptive research to tailor the blocks to local conditions.

PROJECT PLAN: The principal activities in the next phase will include (i) workshops on adapting and transferring the technology; (ii) training extension workers at the district level; (iii) observing the response from farmers and subsequent fine tuning; and (iv) development of master plans at the village level that address the related issues of water supply, feeding stall construction, and the quality and choice of locally available feedstocks. These activities will take place in three additional livestock rearing areas concentrated in the eastern region. The anticipated project outputs will consist of (i) district training centres with supporting infrastructures; (ii) UMMB formulas optimized for utilization of locally available raw materials; and (iii) widespread adoption of the new feeding strategy.

NATIONAL COMMITMENT: Organizations responsible for implementing the project are part of an integrated network that extends to the individual farmers. The participants include National Atomic Energy Agency - Centre for the Application of Isotopes and Radiation (BATAN-CAIR), the Ministry of Agriculture, the Ministry of Cooperatives and Small-scale Industries, the Directorate of Animal Husbandry, and representatives of the farmers' Cooperative Unions. Together, they have produced a detailed workplan. The Government is committed to maintaining the infrastructure by earmarking supplemental funds exceeding $250,000 per year.

AGENCY INPUT: The Agency will assist in conducting a series of technical workshops, and will provide training courses and a small amount of equipment.

PROJECT IMPACT: Earlier studies established the efficacy of the UMMB supplements under conditions typical for smallholder farmers in traditional villages. Proven benefits to livestock include increased weight gain, earlier maturation, higher milk yield, and reduced mortality. Under the current project, the technology will reach six new sites in Java, Sumatra, and Sulawesi, involving 4500 farms and more than 10,000 animals. To maximize impact, extension work will emphasize quality control in block production, and the logistics of their use in conjunction with the local staple diet. Adaptive research will optimize the use of locally available raw materials for block production. Longer term benefits include alleviation of malnutrition and poverty through the development of rural economies in a way that will also benefit women and the unemployed.